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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,659	03/15/2002	Jeffrey A. Tilton	25102A	2971

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EXAMINER
BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/099,659	TILTON, JEFFREY A.	
	Examin r	Art Unit	
	Jennifer A Boyd	1771	

-- Th MAILING DATE of this communication appears on the cover she t with the corr spondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1 page* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

> The oath or declaration is defective because:
> It does not identify the mailing or post office address of each inventor. A mailing or post office address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing or post office address should include the ZIP Code designation. The mailing or post office address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

Claim Objections

2. Claims 6 and 10 are objected to because of the following informalities: It is suggested to the Applicant to put each acoustical absorption coefficient paired with the appropriate frequency in separate dependent claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 4, 13 – 15 and 17 – 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Thompson et al. (US 5,841,081).

Thompson is directed to molded, three-dimensional nonwoven web used for acoustical

insulation (Title and Abstract).

As to claim 1, Thompson teaches a nonwoven web comprising *organic microfibers* 12 and *heat activatable staple fibers* 14 and also preferably contains *bulking stable fiber* 16 (Abstract and Figure 1). The Examiner equates the *organic microfibers* to Applicant's "low melt bicomponent fiber", the *heat activatable fibers* to Applicant's "high melt bicomponent fiber" and the *bulking staple fiber* to Applicant's "staple fiber". The *organic microfibers* can be a bicomponent microfiber such as polypropylene/polyester fibers (column 6, lines 56 – 61) and the *heat activatable fibers* can be a bicomponent fiber having a copolyester sheath and a polyester core such as Celbond^{TM} 54 (column 7, lines 15 – 23). The nonwoven web contains about 20 to 80 weight percent of the *organic microfiber*, meeting Applicant's requirement of 20 – 60 weight percent (column 6, lines 13 – 16), about 15 weight percent or more of the *heat activatable staple fibers*, meeting Applicant's requirement of 10 – 40 weight percent (column 7, lines 12 – 16) and about 0 to 40 weight percent of *bulking staple fiber*, meeting Applicant's requirement of 20 – 60 weight percent (column 8, lines 13 – 20).

As to claims 2 – 4, Thompson teaches that the *organic microfibers* have a diameter of about 1 to 25 micrometers (column 6, lines 36 – 40), the *heat activatable fibers* have a denier in the range of 1 to 100 denier (column 7, lines 40 – 45) and the *bulking staple fibers* have a diameter of about 1 to 100 denier (column 8, lines 1 – 5). In the instance of polyester, assuming an approximate density of 1.37 g/cm^3, the yarn would meet the Applicant's denier requirements.

As to claim 13, Thompson teaches that the bulking staple fibers can be formed from polyester, polyolefins such as polyethylene and polypropylene, polyamides such as nylon and rayons (column 8, lines 5 – 8).

As to claim 14, Thompson teaches that the *organic microfibers,* or "low melt bicomponent fibers", can be a bicomponent microfiber such as polypropylene/polyester fibers (column 6, lines 56 – 61). It is known in the art that the term "polyester" is commonly used for the term "polyethylene terephthalate".

As to claim 15, Thompson teaches that the *organic microfibers,* or "low melt bicomponent fibers", can be the bicomponent microfibers such as polypropylene/polyester fibers as shown in the patent US 4,547,420 to Krueger et al. (column 6, lines 56 – 61). It is shown in Figure 2A of Krueger that the bicomponent microfiber is in a side-by-side configuration. Thompson teaches that the *heat activatable fibers*, or "high melt bicomponent fibers" can be a sheath-core configuration as suggested by the use of a bicomponent fiber such as Celbond™ 54 (column 7, lines 15 – 23).

As to claims 17 and 18, Thompson teaches that the *heat activatable fibers*, or "high melt bicomponent fibers", can be a bicomponent fiber having a copolyester sheath and a polyester core such as Celbond™ 54 (column 7, lines 15 – 23).

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 5 – 7, 10 – 12, 16 and 19 - 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Thompson et al. (US 5,841,081).

As to claims 5 – 7, 10 –12, 16 and 19 - 20, although Thompson does not explicitly teach the claimed flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6 and 10, the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11, the low melt bicomponent fibers have a melt flow temperature of about 100 to 130 degrees Centigrade as required by claim 16, the high melt bicomponent fibers have a melt flow temperature of about 170 to 200 degrees Centigrade as required by claim 19 and the crystalline/semi-crystalline fibers having a melt flow temperature of about 150 to 180 as required by claim 20, it is reasonable to presume that the claimed flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6 and 10, the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11, the low melt bicomponent fibers have a melt flow temperature of about 100 to 130 degrees Centigrade as required by claim 16, the high melt bicomponent fibers have a melt flow temperature of about 170 to 200 degrees Centigrade as required by claim 19 and the crystalline/semi-crystalline fibers having a melt flow temperature of about 150 to 180 as required by claim 20 is inherent to Thompson. Support for said presumption is found in the use of like materials (i.e. a nonwoven web comprising *organic microfibers* and *heat activatable staple fibers* and *bulking stable fiber*, where the *organic microfibers* can be a bicomponent microfiber such as a polypropylene/polyester fiber and the *heat activatable staple*

fibers can be a bicomponent Celbond™ K54 fiber) which would result in the claimed property. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of flexural strength of between about 40 – 1200 psi as required by claim 5, the material has the acoustical absorption coefficients as shown in claims 6 and 10, the material has thermal conductivity value of between about 0.20 and 0.30 at 2 pcf density as required by claims 7 and 11, the low melt bicomponent fibers have a melt flow temperature of about 100 to 130 degrees Centigrade as required by claim 16, the high melt bicomponent fibers have a melt flow temperature of about 170 to 200 degrees Centigrade as required by claim 19 and the crystalline/semi-crystalline fibers having a melt flow temperature of about 150 to 180 as required by claim 20 would obviously have been present once the Thompson product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to providing of this rejection made above under 35 USC 102.

As to claim 5, Thomson teaches that the density of the molded nonwoven web is generally about 6 to 200 kilograms per cubic meter (column 5, lines 9 – 11). By using the conversion factor of 1 kilogram per cubic meter = 0.0624 pounds per cubic foot, the density is about 0.3746 – 12.49 pounds per cubic foot.

As to claim 12, Thompson teaches that the bulking staple fibers can be formed from polyester, polyolefins such as polyethylene and polypropylene, polyamides such as nylon and rayons (column 8, lines 5 – 8).

As to claim 20, Thompson teaches that the *heat activatable fibers*, or "high melt bicomponent fibers", can be a crimped sheath-core bonding fiber having a core of crystalline polyethylene terephthalate surrounded by a sheath of an adhesive polymer formed from

isophthalate and terephthalate esters (column 7, lines 45 – 50), equated to Applicant's "crystalline/semicrystalline bicomponent fibers".

Claim Rejections - 35 USC § 103

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson et al. (US 5,841,081).

As to claim 8, Thompson teaches that the nonwoven web contains *heat activatable staple fibers,* or "high melt bicomponent fibers", which can be a bicomponent fiber having a copolyester sheath and a polyester core such as Celbond™ 54 (column 7, lines 15 – 23). Thompson teaches that the nonwoven web additionally contains *organic microfibers*, or "low melt bicomponent fibers", which can be a bicomponent microfiber such as polypropylene/polyester fibers (column 6, lines 56 – 61). Thompson fails to teach that the *organic microfibers* can comprise a sheath of co-polyester and a core of polyester fiber. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a fiber using a sheath of co-polyester and a core of polyester fiber since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416. It should be noted that polyester is a commonly used polymer in the art and is commonly interchangeable with polypropylene due to similar melting temperatures and other mechanical properties. Additionally, sheath-core bicomponent configurations are commonly used in such applications.

As to claim 9, Thompson teaches that the bulking staple fibers can be formed from polyester, polyolefins such as polyethylene and polypropylene, polyamides such as nylon and rayons (column 8, lines 5 – 8).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Boyd whose telephone number is 703-305-7082. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jennifer Boyd
August 11, 2003